

Notice of Allowability	Applicati n No.	Applicant(s)	
	10/611,898	YOO ET AL.	
	Examiner	Art Unit	
	Asok K. Sarkar	2829	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Application filed 7/3/2003.
2. ☒ The allowed claim(s) is/are 1-10.
3. ☒ The drawings filed on 03 July 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

EXAMINER'S AMENDMENT

1. The Applicant's representative was contacted in order to amend the abstract to reduce its size below 150 words and to rewrite the step (b) of claim 1 in order to clearly state the limitations of the step.
2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Benjamin Hauptman on June 9, 2004.

The application has been amended as follows:

In the Abstract, in line 2, following the word 'diodes', delete "is provided. The method comprises the steps of, " and insert - - starts by - - .

Replace claim 1 with the attached copy of the new version of claim 1.

Allowable Subject Matter

3. Claims 1 – 10 are allowed.
4. The following is an examiner's statement of reasons for allowance:

Claims 1 – 10 recite, inter alia, a method of manufacturing GaN light emitting diodes comprising the steps of partially cutting the light emitting structure formed on a substrate into plural units so that at least approximately 100 Å of the thickness of the first conductive GaN clad layer remains on the substrate, attaching a conductive

Art Unit: 2829

substrate to exposed upper surfaces of the unit light emitting structures using a conductive adhesive layer, irradiating a laser beam on the sapphire substrate to remove the sapphire substrate from the unit light emitting structures, wherein the residual first conductive GaN clad layer is removed so that the light emitting structure can be perfectly divided into the unit light emitting structures with a size same as that of light emitting diodes to be finally manufactured, forming contacts and cutting the resulting structure along the cut lines of the unit light emitting structures into plural unit light emitting diodes. Although, Kelly, US 6,559,075 teaches a method of separating the substrate from a GaN LED device by illuminating with an electromagnetic radiation, attaching a conductive substrate and applying contacts on both sides, he fails to teach the step of partially cutting the structure before attaching the second substrate and completely separating the LEDs after applying the contacts on both sides of the devices. Additionally, the art of record does not disclose or anticipate the above limitation in combination with other claim elements nor would it be obvious to modify the art of record so as to form a device including the above limitation.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shakuda, US 5,557,115; Yamamoto, US 5,994,205; Haerie, US 6,100,104; Ishida, US 6,562,701; Liu, US 6,665,820 and Ogawa, US 22002/0182839 teach methods for fabricating GaN LEDs.

Art Unit: 2829

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Asok K. Sarkar whose telephone number is 571 272 1970. The examiner can normally be reached on Monday - Friday (8 AM- 5 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kammie Cuneo can be reached on 571 272 1957. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Asok K. Sarkar
June 10, 2004

Patent Examiner


KAMAND CUNEO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800